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PATENT

Rev 02/07

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application : Mary Jo Ondrechen et al.
Application No. : 10/678,756
Filed : October 2, 2003
Confirmation No. : 6620
For : COMPUTATIONAL METHOD FOR PREDICTING PROTEIN INTERACTION SITES
Examiner : Larry D. Riggs II
Attorney's Docket : NU-593XX

TC Art Unit: 1631

* *

I hereby certify that this correspondence is being sent via facsimile to Examiner Larry D. Riggs II, TC Art Unit 1631, Fax No. (571) 273 8300, on Aug. 15, 2008.

By: Holliday C. Heine
Holliday C. Heine, Ph.D.
Registration No. 34,346
Attorney for Applicant(s)

* *

DECLARATION OF DR. MARY JO ONDRECHEN UNDER 37 C.F.R. §1.132

VIA FACSIMILE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

I, Mary Jo Ondrechen hereby declare that:

1. I hold the position of Professor of Chemistry and Chemical Biology at Northeastern University in Boston, Massachusetts.

2. My areas of expertise include chemistry and genomics.

3. I am a co-inventor of the subject matter described and claimed in the above-identified patent application.

4. I have read and understood the Office Action of the Examiner dated September 17, 2007, rejecting the currently pending claims 1-16.

5. The method of this invention provides a way of determining interaction sites in a protein whose 3D structure has been identified. We describe in the specification that this 3D structure can be determined in a number of ways, e.g., determined experimentally, downloaded from a database of a protein data bank (where the vast majority of proteins structures listed are experimentally determined) or determined by comparative/homology modeling. Our method is then applied to this identified structure.

6. The Examiner apparently has accepted that our specification is enabling for determining interaction sites in a "protein of experimentally determined structures." Presumably, the Examiner also accepts that proteins of experimentally determined structures include those downloaded from a database as well as those actually determined by the practioners of this method themselves.

7. However, the Examiner appears to question that a protein three-dimensional structure can be theoretically predicted using a modeling method. Comparative/homology modeling is an accepted method of protein structure determination, in use well before this application was filed. For example, SWISS-MODEL

(http://swissmodel.expasy.org), an automated comparative protein modeling server, was initiated in 1993. Its purpose is "to make protein modeling accessible to all biochemists and molecular biologists world wide." A printout of several pages from this website, including the abstract of a paper by the initiator of the modeling server, are attached to this Declaration.

8. Furthermore, in work completed since this application was filed, my co-inventors and I have carried out a large scale experiment using the method of the invention to locate the active site in 21 sets of protein structures built by comparative modeling. Attached herewith is the abstract of our paper (Shehadi et al., Active site prediction for comparative model structures with THEMATICS. Journal of Bioinformatics and Computational Biology (2005), 3(1), 127-143) showing these results. The method of the invention was shown to correctly locate the active site in the model structures.

Attorney Docket No: NU-593XX
Inventor(s): Mary Jo Ondrechen et al.
Application No.: 10/678,756
TC Art Unit: 1631/Examiner: Larry D. Riggs II
OA Date: 09/17/2007/Resp. Date: 01/17/07

I hereby declare that all statements made herein on personal knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signed this 12th day of May, 2008.

By ______________________
Mary Jo Ondrechen

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